

## IN THE CLAIMS

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Please cancel Claims 1-3, and add new claims 4-46, as follows:

- 2 4. An apparatus for transmitting message signals in a  
communications system having new calls entering the  
communications system and spreading codes assigned to the  
4 new calls, comprising:  
(a) means for dividing the spreading codes into bins according  
6 to indices of the spreading codes;  
(b) means for determining a number of active spreading codes  
8 in the bins;  
(c) means for selecting a spreading code in accordance with  
10 the determination of step (b); and  
(d) means for assigning the selected spreading code to the  
12 new call.
- 2 5. The transmission apparatus of claim 4, wherein the spreading  
codes are divided into cycles according to the indices.
- 2 6. The transmission apparatus of claim 4, wherein the number of  
bins is  $n$  and the spreading codes are divided into bins in  
accordance with the value of their indices modulo  $n$ .
- 2 7. The transmission apparatus of claim 4, further comprising  
means for determining a minimum number of active spreading  
codes in the bins.
- 2 8. The transmission apparatus of claim 7, further comprising the  
means for selecting the spreading code in accordance with the  
minimum number of active spreading codes.

9. The transmission apparatus of claim 8, wherein a plurality of the  
bins contain the minimum number of active spreading codes,  
further comprising:

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means for selecting a bin the plurality of bins  
containing the minimum number of active spreading  
codes; and  
means for selecting a spreading code from the  
selected bin.

10. The transmission apparatus of claim 9, further comprising:

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means for determining a subset of the bins containing the  
minimum number of active spreading codes; and  
means for selecting a first predetermined bin with a  
preference lower than a preference for the remaining bins  
of the subset of the bins.

11. The transmission apparatus of claim 10, wherein the first  
predetermined bin comprises a pilot signal bin.

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12. The transmission apparatus of claim 10, further comprising means  
for selecting a second predetermined bin with a preference  
greater than the preference of the first predetermined bin and a  
preference less than the preference of the remaining bins of the  
subset of the bins.

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13. The transmission apparatus of claim 10, further comprising means  
for selecting a bin of the subset of remaining bins with equal  
preference.

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14. The transmission apparatus of claim 5, including a current cycle  
wherein the means for selecting a spreading code comprises  
means for selecting a spreading code within the current cycle.

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2 15. The transmission apparatus of claim 14, further comprising means for selecting a spreading code in a differing cycle only when no spreading codes are available in the current cycle.

2 16. A computer readable medium embodying a method for transmitting message signals in a communications system having new calls entering the communications system and spreading codes assigned to the new calls, the method comprising of the steps of:

6 (a) dividing the spreading codes into bins;

8 (b) determining a number of active spreading codes in the bins;

10 (c) selecting a spreading code in accordance with the determination of step (b); and

(d) assigning the selected spreading code to the new call.

2 17. The computer readable medium of claim 16, wherein the spreading codes have indices and step (a) comprises dividing the spreading codes according to the indices.

2 18. The computer readable medium of claim 17, wherein the spreading codes are divided into cycles according to the indices.

2 19. The computer readable medium of claim 17, wherein the number of bins is  $n$  and the spreading codes are divided into bins in accordance with the value of their indices modulo  $n$ .

2 20. The computer readable medium of claim 16, the method further comprising the step of determining a minimum number of active spreading codes in the bins.

21. The computer readable medium of claim 20, the method further comprising the step of selecting the spreading code in accordance with the minimum number of active spreading codes.

22. The computer readable medium of claim 21, wherein a plurality of the bins contain the minimum number of active spreading codes, comprising the step of:

selecting a bin from the plurality of bins containing the minimum number of active spreading codes; and  
selecting a spreading code from the selected bin.

23. The computer readable medium of claim 22, the method further comprising the steps of:

determining a subset of the bins containing the minimum number of active spreading codes; and  
selecting a first predetermined bin with a preference lower than a preference for the remaining bins of the subset of the bins.

24. The computer readable medium of claim 23, wherein the first predetermined bin comprises a pilot signal bin.

25. The computer readable medium of claim 23, the method further comprising the step of selecting a second predetermined bin with a preference greater than the preference of the first predetermined bin and a preference less than the preference of the remaining bins of the subset of the bins.

26. The computer readable medium of claim 23, the method further comprising the step of selecting a bin of the subset of remaining bins with equal preference.

27. The computer readable medium of claim 18, including a current  
2 cycle wherein the step of selecting a spreading code comprises  
selecting a spreading code within the current cycle.
28. The computer readable medium of claim 27, the method further  
2 comprising the step of selecting a spreading code in a differing  
cycle only when no spreading codes are available in the current  
4 cycle.
29. An apparatus for transmitting message signals in a  
2 communications system having new calls entering the  
communications system and spreading codes assigned to the  
4 new calls, comprising:  
(a) means for dividing the spreading codes into bins;  
6 (b) means for determining traffic channel gains of active  
spreading codes in the bins;  
8 (c) means for selecting a spreading code in accordance with  
the determination of step (b); and  
10 (d) means for assigning the selected spreading code to the  
new call.
30. The transmission apparatus of claim 29, wherein the spreading  
2 codes are divided according to the indices.
31. The transmission apparatus of claim 30, wherein the spreading  
2 codes are divided into cycles according to the indices.
32. The transmission apparatus of claim 29, wherein the number of  
2 bins is  $n$  and the spreading codes are divided into bins in  
accordance with the value of their indices modulo  $n$ .
33. The transmission apparatus of claim 29, further comprising  
2 means for updating the bins using the traffic channel gains of the  
active spreading codes in the bins.

34. The transmission apparatus of claim 33, wherein the updating is periodic.

35. A method for transmitting message signals in a communications system having new calls entering the communications system and spreading codes assigned to the new calls, comprising:

- (a) dividing the spreading codes into bins;
- (b) determining traffic channel gains of active spreading codes in the bins;
- (c) selecting a spreading code in accordance with the determination of step (b); and
- (d) assigning the selected spreading code to the new call.

36. The transmission method of claim 35, wherein the spreading codes are divided into cycles according to the indices.

37. The transmission method of claim 36, wherein the spreading codes are divided into cycles according to the indices.

38. The transmission method of claim 35, wherein the number of bins is  $n$  and the spreading codes are divided into bins in accordance with the value of their indices modulo  $n$ .

39. The transmission method of claim 35, further comprising updating the bins using the traffic channel gains of the active spreading codes in the bins.

40. The transmission method of claim 39, wherein the updating is periodic.

41. A computer readable medium embodying a method for transmitting message signals in a communications system having new calls entering the communications system and spreading codes assigned to the new calls, the method comprising:

- 6 (a) dividing the spreading codes into bins;  
6 (b) determining traffic channel gains of active spreading codes  
in the bins;  
8 (c) selecting a spreading code in accordance with the  
determination of step (b); and  
10 (d) assigning the selected spreading code to the new call.

2 42. The computer readable medium of claim 41, wherein the  
spreading codes are divided into cycles according to the indices.

2 43. The computer readable medium of claim 42, wherein the  
spreading codes are divided into cycles according to the indices.

2 44. The computer readable medium of claim 41, wherein the number  
of bins is  $n$  and the spreading codes are divided into bins in  
accordance with the value of their indices modulo  $n$ .

2 45. The computer readable medium of claim 41, further comprising  
updating the bins using the traffic channel gains of the active  
spreading codes in the bins.

2 46. The computer readable medium of claim 45, wherein the updating  
is periodic.

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